

## **REMARKS/ARGUMENTS**

The Office Action mailed February 16, 2006 has been carefully considered.

Reconsideration in view of the following remarks is respectfully requested.

### Claim Status and Amendment to the Claims

Claims 3, 6, 9-15, and 17-39, 42-63 are now pending. No claims stand allowed.

Claims 4-5 and 40-41 have been canceled by this amendment, without prejudice.

Claims 3, 30, 39, 45, and 53-54 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention. Support for the amendment may be found in the present specification, for example, page 3, paragraph [0009]. Claims 6 and 42 have been amended to depend from claims 3 and 39, respectively. Claims 38, 52, and 55 have been amended so as to depend from claims 30, 45, and 54, respectively. The text of claims 6, 9-15, 17-29, 31-37, 42-44, and 45-51 is unchanged, but their meaning is changed because they depend from one of amended claims 3, 30, 39, and 45.

New claims 56-63 have been added, which also particularly point out and distinctly claim subject matter regarded as the invention. Support for these claims may be found in the specification, pages 23-24, paragraph [0072].

No “new matter” has been added by the amendment.

### The 35 U.S.C. §103 Rejection

Claims 3-6, 9-13, 18-20, 24-25, 27-29, 31-34, 36-37, 40-43 and 47-51 stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Shen (European

Pat. Application Pub. No. EP 1 074 949 A1) in view of any of Ritter (U.S. Pat. Application Pub. No. 2002/011164), McPhillie et al. (UK Pat. Application Pub. No. GB 2 336 005 A), and Setlak et al. (U.S. Pat. No. 5,852,670), among which claims 3, 30, 39, 45, 53, and 54 are independent claims.

This rejection is respectfully traversed.

According to M.P.E.P. §2143,

To establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure.

Furthermore, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

**Regarding Claims 3, 39, and 53:**

Claim 3 defines an intelligent identification card comprising (a) an on-board memory for storing reference data, (b) an on-board sensor for capturing live biometric data, (c) an on-board microprocessor for comparing the captured biometric data with corresponding stored reference data within a predetermined threshold and for generating a verification message only if there is a match within a predetermined threshold, and (d) an interface for communicating the verification message to an external network, wherein the verification message includes at least excerpts from the captured biometric data, the

verification message being transmitted to a remote authentication system for additional verification using reference data which is different from the reference data stored on said on-board memory, as recited in claim 3 as amended.

In the Office Action, the Examiner specifically contends that the elements of the presently claimed invention are disclosed in Shen except that Shen does not teach the verification message including at least excerpts from the captured biometric data. The Examiner further contends that Ritter teaches the verification message including at least excerpts from the captured biometric data, citing paragraph [0042] and [0072] thereof, and that it would be obvious to one having ordinary skill in the art at the time of the invention to incorporate Ritter into Shen because the supplied biometric data is used to determine if the identity of the user is verified. Claims 39 and 53 also stand rejected in a similar manner.

The Applicants respectfully disagree for the reasons set forth below.

Shen relates to an integrated circuit board 1 with fingerprint verification capability. In Shen, fingerprint data scanned by a fingerprint sensor 12 is compared with reference data stored in a memory device 11. In Shen, upon verifying that a holder of the card is the assigned user, a segment of the fingerprint reference data stored in the memory device 11 may be transmitted to the host computer 3 for increased security of network transaction (column 3, lines 31-41 thereof). That is, Shen sends to the host computer 3

part of the fingerprint reference data which is the same as that used on the card 1 (on-board verification) for additional security.

Ritter relates to a method for sending an order data from a terminal 3 to a provider (page 1, paragraph [0002] thereof), using an identification module (chip card) 4 plugged in the terminal 3. Ritter's order message contains user identification information such as IMSI (International Mobile Subscriber Identity) obtained from the chip card 4, and optional biometric parameters of the user. The order message is sent by the terminal 3 to the server 8. The server verifies the user's identity by determining the IMSI, and by comparing the optional biometric parameters with stored parameters (expected values) (paragraphs [0018], [0021], [0042]-[0043], and [0072] of Ritter). Thus, Ritter's teaching is simply sending an order message from an unverified user, i.e., a pre-verification order message, with biometric parameters to the remote server 8 for the first-time verification, contrary to the claimed invention where the verification message is generated only if the fingerprint data matches (i.e., post-verification message). It should be noted that Ritter's system (the terminal 3 and the identification module 4) is incapable of on-board verification of any kind.

On the other hand, Shen's system already has on-board biometric/fingerprint verification capability. Thus, there is no desirability for those of ordinary skill in the art to combine Ritter with Shen to send biometric parameters in order "to determine if the identity of the user is verified," as the Examiner alleges. Even if alleged motivation for further verifying the user and/or increase security of transaction is given, Shen already

teaches sending part of the same fingerprint reference data to a host computer for such further verification. Thus, there is no motivation for those of ordinary skill in the art to further modify Shen with Ritter because such an allegedly desirable function (further verification) already exist in Shen's system.

It should be noted that Shen's reference data is used to further verify an apparently on-board verified user in order to prevent a disguised user's access to the system (see column 4, lines 12-17 thereof). In Shen, using captured fingerprint data, instead of reference data, would disadvantageously repeat pattern recognition/extraction processes at the host computer 3 before comparing the captured data with the reference data. Furthermore, using the captured data would not work with scan data selection process by the on-board processing unit 14 described column 3 lines 45-57 of Shen because the scan line numbers of the fingerprint data must be the same in the memory 11 and in the host computer 3. Thus, Shen's system teaches away from sending the captured data instead of the reference data. In addition, as discussed above, Ritter only teaches sending biometric parameter with a pre-verification message.

Accordingly, none of the cited references provide desirability or motivation to combine Shen and Ritter.

In addition, even if Ritter should be combined with Shen, since Shen's system requires the alleged on-board verification message to contain the fingerprint reference data, not the captured data, as discussed above, the alleged combination would send

Ritter's order message containing the biometric parameter independently of Shen's alleged on-board verification message, in order "to determine if the identity of the user is verified," as the Examiner alleges. Thus, the alleged combination still fails to teach including at least excerpts from the captured biometric data in the verification messages which is generated only if there is a match between the captured biometric data and the stored reference data, as recited in claim 3.

Furthermore, neither Shen nor Ritter teaches or suggests using remotely stored reference data which is different from the on-board reference data, as recited in claim 3.

Therefore, Shen, whether considered alone or combined with or modified by Ritter, does not teach the claimed the verification message including at least excerpts from the captured biometric data, the verification message being transmitted to a remote authentication system for additional verification using reference data which is different from the reference data stored on said on-board memory, as recited in claim 3.

Claims 39 and 53 include substantially the same distinctive features as claim 3.

Accordingly, it is respectfully requested that the rejection of claims based on Shen and Ritter be withdrawn. In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

**Regarding Claims 30, 45, and 54:**

Claim 30 defines an intelligent identification card comprising (a) an on-board sensor for capturing live biometric data, (b) a first on-board processor coupled with said on-board sensor, said first on-board processor including a memory storing reference data, said first on-board processor comparing the captured biometric data with corresponding stored reference data within a predetermined threshold and generating a verification message only if there is a match within a predetermined threshold, (c) a second on-board processor coupled with said first on-board processor, for executing intelligent card functions, the verification message enabling said second on-board processor, and (d) an interface coupled to either one of said first on-board processor and said second on-board processor, for communicating with an external network, as recited in claim 30.

In the Office Action, the Examiner specifically contends that the elements of the presently claimed invention are disclosed in Shen except that Shen does not teach a second on-board processor coupled with the first on-board processor, for executing intelligent card functions. The Examiner further contends that McPhillie teaches a second on-board processor coupled with the first on-board processor, for executing intelligent card functions, citing FIG. 4, box 119 thereof, and that it would be obvious to one having ordinary skill in the art at the time of the invention to incorporate McPhillie into Shen because utilizing a second co-processor for a specific purpose makes the processor faster. Claims 45 and 54 also stand rejected in a similar manner. The Applicants respectfully disagree for the reasons set forth below.



McPhillie allegedly discloses two processor system in Emulation Module Interface (EMI) 40 for a smartcard processor (integrated circuit) 110. In a smart card, the IC 100 would be used to transmit encrypted data to a reader terminal and decrypt data received from the terminal (page 8, lines 8-10 of McPhillie), as well as performing other functions typical to such a smartcard processor (see FIG. 4 of McPhillie).

First, it should be noted that McPhillie defines “a processor” as “either microcontroller or microprocessor implemented as an integrated circuit, when used in a physical sense” (page 7, lines 9-11 thereof). Thus, the integrated circuit (“smart card IC”) 100 is a microprocessor, and all modules, units, and memories (boxes 114 through 128) illustrated in FIG. 4 are internal functional components of the IC 100. McPhillie further clarifies that that “the particular functional blocks of even a smart card IC may in fact not be clearly identifiable as “blocks” on the actual manufactured IC” (page 9, lines 13-16 thereof). Thus, contrary to the Examiner’s allegation, McPhillie’s security module 119 is merely an internal functional component of an microprocessor, not the second or security microprocessor as recited in claim 30.

In McPhillie, although the EMI 40 may have a unsecure processor 44 and a secure processor 46, both of the processors are provided to emulate the single integrated circuit (IC) 100, and not provided in a smartcard. The secure processor 46 is substantially the same as the IC 100 (page 9, lines 25-26 of McPhillie), and the unsecure processor 44 is also similar to the IC 100 but lacks cryptographic functions, i.e., the cryptographic execution unit (CEU) 128 (page 9, lines 27-29, FIG. 4 of McPhillie). It should be noted



that the security module **119**, which does not perform cryptography, is also included in the unsecure processor **44** (page 9, lines 31-33 of McPhillie).

Accordingly, McPhillie's alleged teaching is at most providing two versions of "copies" from a single processor: a secure/full version containing all of the functionality including a particular/restricted function; and an unsecure/reduced version without that particular/restricted function, as the Examiner correctly referred to it as "co-processor." McPhillie does not teach or suggest providing a new processor which has additional or different functionality which is not included in the original processor (i.e., the IC **100**). Thus, if McPhillie's teaching should be combined with Shen, the alleged combination would provide another copy of Shen's processor **14** which only lacks a particular function. Such an alleged combination would not include a new or second processor having intelligent card functions, because Shen's original processor **14** does not have such intelligent card functions. On the other hand, in the claimed invention, the first on-board processor (fingerprint matching/verification) and the second on-board processor (intelligent card functions) have different functionalities which cannot be obtained as a full copy and a reduced copy of the same processor.

Furthermore, McPhillie only teaches providing such a "co-processor" system outside of the smartcard, and thus does not suggest providing any co-processor within the smartcard in which the IC **100** is actually implemented.

Accordingly, Shen, whether considered alone or combined with or modified by McPhillie, does not teach an intelligent identification card comprising, among others, a first on-board processor coupled with said on-board sensor, said first on-board processor including a memory storing reference data, said first on-board processor comparing the captured biometric data with corresponding stored reference data within a predetermined threshold and generating a verification message only if there is a match within a predetermined threshold, and a second on-board processor coupled with said first on-board processor, for executing intelligent card functions, as recited in claim 30.

Claims 45 and 54 include substantially the same distinctive features as claim 30.

Accordingly, it is respectfully requested that the rejection of claims based on Shen and McPhillie be withdrawn. In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

#### Dependent Claims

Claims 6, 9-15, and 17-29 depend from claim 1, claims 31-38 (and new claims 56-59) depend from claim 30, claims 42-44 depend from claim 39, claims 46-52 (and new claims 60-63) depend from claim 45, and claim 55 depends from claim 54, and thus include the limitations of the corresponding independent claims. The argument set forth above is equally applicable here. The base claims being allowable, the dependent claims must also be allowable at least for the same reasons.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

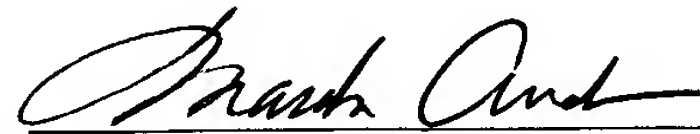
Conclusion

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 50-1698.

Respectfully submitted,  
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